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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
LOFTIS, JOHNNA	
ART UNIT	PAPER NUMBER
3623	

DATE MAILED: 12/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/919,302	SARLAY ET AL.	
	Examiner	Art Unit	
	Johnna R. Loftis	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *40,41,44-46 and 48-54* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *40,41,44-46 and 48-52* is/are rejected.

7)☒ Claim(s) *53 and 54* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/25/05 has been entered.

Response to Arguments

2. Applicant's arguments filed 10/25/05 have been fully considered but they are not persuasive. Applicant argues that Pipkins does not teach a percentage of the contact load is allocated into each time period. However, Examiner asserts that the distribution of the total email received over a time span would result in a percentage of the email being allocated to each time period. Prior rejections have been modified.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claims 40, 41, 44-46, 48-52** are rejected under 35 U.S.C. 103(a) as being unpatentable by Pipkins' Maxima Advantage incorporating Mustang Reports ™, hereinafter referred to as

Pipkins. Applicant is reminded that the following rejection is based on the product of Pipkins. The following references discuss the following aspects of the Pipkins email management system:

"Mustang.com and Pipkins Join Forces In eService Workforce Management" – December 23, 1999 from Proquest. Reference paragraphs 1-10.

"Pipkins Teams with Mustang.com to Enable Call Center Agents to Integrate Phone Call and Email Functions" – March 16, 2000 from Proquest. Reference paragraphs 11-19.

As per **claim 40**, Pipkins teaches the given function is based on one or more factors selected from a set of factors including: a number of contact center agents expected to be available to service the contacts during the given set of identified number of time periods, an amount of time that a contact center agent may allocate to service contacts, an amount of excess capacity that a contact center agent has available, a backlog goal, an agent average handling time, and agent schedule adherence (paragraph 7 – balancing the burden of work to be completed with the resources available to complete that work, paragraph 15 – average handling time is used to staff the email responses).

As per **claim 41**, Pipkins teaches using the second forecast to generate a staffing requirement for the given future time period (paragraph 2 – forecasting is used to predict e-mail customer representative staffing requirements).

Claim 42 cancelled.

Claim 43 cancelled.

As per **claim 44**, Pipkins teaches generating a staffing requirement for the given future time period as a function of the aggregate contact load that has been allocated into that given

future time period (paragraph 15 – the system allows for staffing email response handling more efficiently by knowing the number of emails coming in and the average handling time so that the staffing can be optimized to meet service levels).

As per **claim 45**, Pipkins teaches generating a staffing requirement for the given future time period as reflected in the second forecast, as a function of the aggregate contact load that has been allocated into that given future time period and an agent average handling time that has been forecast for that given future time period (paragraph 15 – the system allows for staffing email response handling more efficiently by knowing the number of emails coming in and the average handling time so that the staffing can be optimized to meet service levels).

As per **claim 46 (currently amended)**, Pipkins teaches (a) identifying a given service level goal for a given future time period within the given future time range of the first forecast, the service level goal describing a maximum amount of time that may occur between receipt of a given contact and handling of the given contact, wherein the given contact comprises a part of the contact load expected to occur during the given future time period (paragraph 1 – service level goals are set and the email customer service workforce is scheduled to meet the goals so that incoming emails are handled by the staff during their shifts); (b) for the given future time period of the first forecast, using the given service level goal identified for that given future time period to identify a number of time periods over which the contact load in that given future time period may be allocated (paragraph 15 – service level goals are used to enable staffing; 2 – forecasting is used to predict e-mail customer representative staffing requirements); and (e) Pipkins inherently teaches the steps being performed on an electronic processor since the Pipkins and Mustang systems are computer based. Pipkins teaches scheduling the workforce based on

forecasts of email, but does not explicitly teach (c) for the given future time of the first forecast, applying a given function to the contact load, wherein as a result, a percentage of the contact load for the given future time period is allocated into each time period of a given set of the identified number of time periods. Since Pipkins teaches forecasting email over time and scheduling workforce to meet the email demands it would have been obvious to use a function to distribute the email over a time span so the workforce could meet the service goals. Inherently, by distributing the total email received over a time span would result in a percentage of the email being allocated to each time period. This would make for a quicker email response system wherein service goals could be met efficiently. Pipkins also does not explicitly teach (d) including the step of repeating steps (a) – (c) on an iterative basis for additional given future time periods within the given future time range to distribute the contact load for each additional given future time period. However, Pipkins teaches an optimization algorithm to forecast and schedule the workforce agents and it is well known to one of ordinary skill in the art that a scheduling optimization algorithm includes many iterations to come up with the optimal solution. The iterations would make the scheduling process be most efficient. Finally, Pipkins does not explicitly teach aggregating the contact load that has been allocated into that given future time period as a result of applying, on an iterative basis, steps a-c to generate a second forecast, the second forecast being a forecast of contact load expected to be handled in each of the set of future time periods within the given future time range, and wherein the second forecast differs from the first forecast in an amount of contact load in at least one future time period. However, since Pipkins teaches forecasting incoming email load and generating staffing requirements based on service level goals and handling time as well as staff availability, and also given the

well known techniques of scheduling manpower to attend to a task within a given time period, it would have been obvious to one of ordinary skill in the art that the contact load expected in a period is allocated or distributed across a time period depending on worker availability and handling time. This distribution obviously would generate a smaller workload for the first period of the entire time period for which there is an overall expected load.

For example, suppose at 9:00 am on Monday it is forecast that there will be 60 incoming emails. It is clear that these emails will be allocated over the work day (by hour, i.e, - this is the time period) depending on workforce availability and handling time (as taught by Pipkins, paragraph 16). Hence depending on worker availability and handling time, possibly only 5 of the 60 emails will be handled; approximately 8.3% of the emails are handled. At the second hour, possibly 8 will be handled, approximately 13.3% of the emails. Therefore the load expected to be handled in the first hour of the day is 5, which differs significantly from the 60 expected to be received in that time period.

In summary, based on Pipkins, it would have been obvious to one of ordinary skill in the art to utilize factors such as worker availability and average handling time, as well as take into consideration service level goals to distribute the forecasted email load over a time period such as a workday, in order to efficiently respond to each email received. This efficient method of allocating the emails across the work day, depending on worker availability and average handling time, would ensure overstaffing or understaffing will not occur which will lead to inferior service and customer dissatisfaction.

Claim 47 cancelled.

As per **claim 48**, Pipkins teaches the contacts that are not required to be serviced by contact center agents in real-time include contacts selected from a set of contacts that include: electronic communications and written communications (paragraph 1 teaches contacts to be serviced include electronic mail – which inherently include a written communication and, unlike telephone calls, do not have to be responded to in real-time).

As per **claim 49**, Pipkins teaches wherein the electronic communications include at least one e-mail (paragraph 1 teaches contacts to be serviced include electronic mail – which inherently include a written communication and, unlike telephone calls, do not have to be responded to in real-time).

As per **claim 50**, Pipkins does not explicitly teach the electronic communications include at least one fax. Pipkins does teach scheduling workforce to handle electronic mail responses. It is old and well known to one of ordinary skill in the art that many email systems have faxing capabilities, therefore it would have been obvious to include faxes in the electronic communications to be distributed among the workforce to be sure each gets responded to in the most efficient manner.

As per **claim 51 (currently amended)**, Pipkins is a software program which inherently teaches the apparatus with code executable on a processor to perform the method of claim 46, therefore the since the references applied to claim 46 teaches a computerized system to perform the method, the same rejection as applied to claim 46 is also applied to claim 51.

As per **claim 52**, Pipkins is a software program which inherently teaches the code executable on a processor to perform the method of claim 45, therefore the since the references

applied to claim 45 teach a computerized system to perform the method, the same rejection as applied to claim 45 is also applied to claim 52.

Allowable Subject Matter

5. Claim 53 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: The closest prior art, Pipkins' Maxima Advantage incorporating Mustang Reports ™, teaches all the features of the dependent claim 46 as recited above, including forecasting email over time and scheduling workforce to meet the email demands wherein it would have been obvious to use a function to distribute the email over a time span so the workforce could meet the service goals, but Pipkins does not teach the recited methods of calculating the given function to propagate the contact load recited in claim 53, wherein the given function generates a product of a first and second value, wherein the first value is a product of the contact load for the given future time period and the given service level goal for the given future time period and the second value is a quotient of a propagation value for a time period of the given set of the identified number of time periods divided by a sum of propagation values for the given set of identified number of time periods.

6. Claim 54 is also objected to as being dependent upon a rejection base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: The closest prior art, Pipkins' Maxima Advantage incorporating Mustang

Reports ™, teaches all the features of the dependent claim 46 as recited above, including forecasting email over time and scheduling workforce to meet the email demands wherein it would have been obvious to use a function to distribute the email over a time span so the workforce could meet the service goals, but Pipkins does not teach the recited methods of calculating the given function to propagate the contact load recited in claim 53, wherein the given function generates a product of a first and second value, wherein the first value is a product of the contact load for the given future time period and the given service level goal for the given future time period and the second value is a quotient of a propagation value for a time period of the given set of the identified number of time periods divided by a sum of propagation values for the given set of identified number of time periods.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Johnna R. Loftis whose telephone number is 571-272-6736. The examiner can normally be reached on M-F 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 571-272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JL
11/30/05

TARIQ R. HAFIZ
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Organization_____ Bldg./Room_____

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